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John W. Northcutt

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COATS & BENNETT, PLLC

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RALEIGH, NC 27602

EXAMINER

CHOW, CHARLES CHIANG

ART UNIT

PAPER NUMBER

2618

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/674,780

Applicant(s)

NORTHCUTT ET AL.

Examiner

Charles Chow

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-20, 22-43, 48-50, 54-57 is/are rejected.
- 7) ☒ Claim(s) 10, 21, 44-47 and 51-53 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### Detailed Action

#### Title

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The current title, "Method and apparatus to synchronize multi-media", is not descriptive for the key features of the invention, for the synchronization of music data with multi-media effect, vibrator, light, taking a picture.

### Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 22-23, 25-28, 41, 55-57 are rejected under 35 U.S.C. 102(e) as being anticipated by Hayashi (GB 2,380,908 A).

**For claim 22**, Hayashi teaches a method [steps in Fig. 3] to synchronize multi-media effects with an audio file in a mobile communications device [ steps 306, 312, to synchronize of the music data with the light/vibration effect from LED 210/vibrator 211 of a mobile phone, abstract, Fig. 2],

the method comprising analyzing an audio file stored in memory of the mobile communications device to extract or generate synchronizing information [ the controller 201 analyzes synchronizing data 501-503 & music indicating data 401-404, to determine the music data for synchronizing with LED or vibrator page 7, lines 5-28, Fig. 4-6; the play data in Fig. 4-5, stored in RAM of memory 202, as the audio file in memory ]; and

synchronizing a complementary multi-media effect in the mobile communications device with the audio file based on the synchronizing information [ the controller 201 makes a positive determination to synchronize music data playing with the LED/vibrator, turn-on/off, page 7, lines 20-25; S305-307; based on the synchronizing indicating data 401-404, 501-505; the synchronizing target type information 401, music source, music identifier & note number in 402-404, the sync data 501-503].

**For claim 23,** Hayashi teaches the mobile phone communications device [Fig. 2], wherein said information is timing information [the time information in tempo 501, the setting of tempo, playing speed, in page 8, lines 24-29].

**For claim 25,** Hayashi teaches the mobile phone communications device [Fig. 2], wherein said processor [201] stores the synchronizing information in said memory [ storing down loaded play data in RAM, which has synchronizing indicating data 501-503, 401-404].

**For claim 26,** Hayashi teaches the mobile phone communications device [Fig. 2], wherein said processor generates a control signal during playback of the audio file to control the complementary multi-media effect according to the synchronizing information [ the LED emits light based on the electrical signal generated from controller 201, page 6, lines 22-28].

**For claim 27,** Hayashi teaches the mobile phone communications device [Fig. 2], wherein the complementary multi-media effect comprises tactile feedback [vibrator 211], and said control signal controls a tactile feedback generator in synchronization with the synchronizing information [ the controller 210 generates electrical signal to synchronize vibrator 211 to played music, page 6, lines 22-28].

**For claim 28,** Hayashi teaches the mobile phone communications device [Fig. 2], wherein the complementary multi-media effect comprises one or more lights [210] and

Art Unit: 2618

said control signal controls the one or more lights in synchronization with the synchronizing information [ the 201 generates electrical signal to emits light from Led 210 to synchronize with played music data specified in 403-404, page 6, lines 22-28].

**For claim 41**, Hayashi teaches a method of synchronizing one or more complementary multi-media effects [ the synchronizing of the music data with vibrator 211, LED 210 in abstract] with an audio file [ the memory 202, page 6, lines 1-7, has music identifier 403 & note number 404 in Fig. 4, page 9, 12-21] in a mobile communications device [mobile phone, page 1, lines 5-10],

the method comprising selecting a sample from an audio file stored in memory in a mobile communications device [ the controller selects the music data contained in play data page 9, lines 3-11 & the indicating data 501-503 in Fig. 5; the indicating data in Fig. 4 contains the music identifier 403 & note number 404 in page 9, lines 5-21; stored in RAM of memory 202];

analyzing said sample to determine synchronizing information [ the 201 determines whether or not the music is contained in the play data S303, page 7, lines 5-15]; and

synchronizing the one or more complementary multi-media effects in the mobile communications device with the audio file based on the synchronizing information [ the controller 201 makes a positive determination to synchronize music data playing with the LED, vibrator, turn-on/off, page 7, lines 20-25; S305-307; based on the synchronizing indicating data 401-404, the synchronizing target type information 401, music source, music identifier & note number in 402-404, the sync data 501-503].

**For claim 55**, Hayashi teaches the further comprising the storing the synchronizing information in memory of the mobile communications device [the mobile phone downloading play data for storing in RAM, page 6, lines 1-7].

**For claim 56**, Hayashi teaches the wherein synchronizing the one or more complementary multi-media effects with the audio file [ the synchronizing of LED, vibrator to music data in indicating data 403-404 of the play data in Fig. 5] comprises generating a control signal to the one or more multi-media effects based on the synchronizing information during playback of the audio file [the LED emits light based on the electrical signal generated from controller 201, page 6, lines 22-28].

**For claim 57**, Hayashi teaches a circuit [Fig. 2] comprising a microprocessor [controller 210] programmed to extract or generate synchronizing information from an audio stream [ the synchronizing is based on the indicating data in play data in the program step 306 executed by the controller 201, in page 7, lines 20-25, & indicating data in Fig. 4, 501-503 in Fig. 5], and

to synchronize one or more complementary multi-media effects with the audio stream during playback of the audio stream [synchronizing LED on/ff, vibrator on/off, base in the music playback, page 7, lines 20-28 & page 8, lines 14-23].

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Brenner et al. (US 2004/0139,842 A1).

**For claim 1**, Hayashi teaches a mobile communications device [mobile phone in Fig.2]

Art Unit: 2618

comprising memory [RAM of 202] to store an audio file [ the memory 202, page 6, lines 1-7, has stored play data which are synchronizing data, 501-503, music identifier 403 & note number 404 in Fig. 4, page 9, 12-21]; and

a processor [ controller 201 ] to analyze the audio file [403-404] and extract or generate synchronizing information [ the controller 201 analyzes synchronizing data 501-503 & music indicating data 401-404, to determine the music data for synchronizing with LED or vibrator page 7, lines 5-28, Fig. 4-6; the play data in Fig. 4-5, stored in RAM of memory 202, as the audio file in memory ]; and

to synchronize a complementary multi-media effect with the audio file based on the synchronizing information [ the controller 201 makes a positive determination to synchronize music data playing with the LED, vibrator, turn-on/off, page 7, lines 20-25; S305-307; based on the synchronizing indicating data 401-404, 501-505; the synchronizing target type information 401, music source, music identifier & note number in 402-404, the sync data 501-503].

Hayashi fails to mention a wireless transceiver.

Brenner et al. [Brenner] teaches the transmitter 310, receiver 308 in Fig. 3 for a cellular telephone, to synchronizing light groupings to different instruments with definition in audio file [abstract, paragraph 0025, 0011, 0039], in order to communicate with cellular network to received down loaded information, such as play data in Hayashi, Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hayashi with transmitter, receiver, in order to communicate with cellular network to down loading play data.

**For claim 2,** Hayashi teaches the mobile phone communications device [Fig. 2], wherein said information is timing information [ the time information in tempo 501, the setting of tempo, playing speed, based on play data in page 8, lines 24-29].

**For claims 4,** Hayashi teaches the mobile phone communications device [Fig. 2], wherein said processor [201] stores the synchronizing information in said memory [ storing down loaded play data in RAM, which has synchronizing indicating data 501-503, 401-404].

**For claims 5,** Hayashi teaches the mobile phone communications device [Fig. 2], wherein said processor generates a control signal during playback of the audio file to control the complementary multi-media effect according to the synchronizing information [ the LED emits light based on the electrical signal generated from controller 201, page 6, lines 22-28; sync data 502, 503].

**For claims 6,** Hayashi teaches the mobile phone communications device [Fig. 2], wherein the complementary multi-media effect comprises tactile feedback [vibrator 211], and said control signal controls a tactile feedback generator in synchronization with the synchronizing information [ the controller 210 generates electrical signal to synchronize vibrator 211 to played music, page 6, lines 22-28, sync data 503].

**For claims 7,** Hayashi teaches the mobile phone communications device [Fig. 2], wherein the complementary multi-media effect comprises one or more lights [210] and said control signal controls the one or more lights in synchronization with the synchronizing information [ the 201 generates electrical signal to emits light from Led 210 to synchronize with played music data specified in 403-404, page 6, lines 22-28].



Art Unit: 2618

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Brenner, as applied to claim 1 above, and further in view of Vandermeijden et al. (US 2004/0067,751 A1).

**For claim 3**, Hayashi teaches the mobile phone communications device [Fig. 2], but fails to teach the wherein said information is instrument type information.

Vandermeijden et al. [Vandermeijden] teaches the user can assign the sound of particular musical instrument to a group of callers, for the ring tone [ paragraph 0025], of the mobile telephone for identifying different caller [abstract]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Hayashi with Vandermeijden's different distinct instrument sound for notifying the incoming call, in order to identify different caller.

5. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Brenner, as applied to claims 5 above, and further in view of Fredlund et al. (US 6,639,649 B2).

**For claim 8**, Hayashi teaches the mobile phone communications device [Fig. 2], but fails to teach the wherein the complementary multi-media effect comprises a camera, and said control signal activates the camera to take a picture in synchronization with the synchronizing information.

Fredlund et al. [Fredlund] teaches these features [ the camera 10; the generate a signal by analyzing stored audio to capture plurality of images in col. 3, lines 23-47; the synchronizing pleasing effect is created in accordance with played music beat in col. 1, lines 1-6], to creating a better effect by playing music while taking a picture. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to

Art Unit: 2618

upgrade Hayashi with the teachings from Fredlund, in order to provide better effect by playing music while taking a picture.

**For claim 9**, Hayashi teaches the mobile phone communications device in Fig. 2, but fails to teach the wherein the complementary multi-media effect comprises a video sequence, and said control signal controls a display to playback said video sequence in synchronization with the synchronizing information.

Fredlund teaches these features [ the music analyzer analyzing stored audio for determining when to display a sequence of stored images according to the stored audio and a audio reproducer for playing the audio recording, col. 1, line 57 to col. 2, lines 7; display 50], using the same reason in claim 8 for combining Fredlund to Hayashi.

6. Claims 11-13, 15-18, 31-32, 35-38, 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Shibata (US 2001/0023,197,197 A1).

**For claim 11**, Hayashi teaches a mobile communications device [Fig. 2] comprising memory to store an audio file [the memory 202, page 6, lines 1-7, has synchronizing indicating data, 501-503 & music identifier 403 & note number 404 in Fig. 4, page 9, 12-21]; a processor to synchronize a complementary multi-media effect with the audio file based on the synchronizing information [ the controller 201 makes a positive determination to synchronize the playing of music data with the LED, vibrator, turn-on/off, page 7, lines 20-25; S305-307; based on the synchronizing indicating data 401-404, 501-505; the synchronizing target type information 401, music source, music identifier & note number in 402-404, the sync data 501-503].

Hayashi fails to teach an interface to input synchronizing information regarding the audio file by a user of the mobile communication device.

Art Unit: 2618

Shibata teaches these features [ the user can depresses input key 1-3, input interface, for entering & storing, of selected synchronizing melody to be played with incoming call, paragraph 0028-0030], for creating selected synchronizing melody to be played with incoming call. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Hayashi with Shibata's input keys for user to select different melody, to allow user to conveniently select different melody to be played when receiving incoming call.

**For claim 12**, Hayashi teaches the mobile phone communications device in Fig. 2, but fails to teach the features for this claim. Shibata teaches the wherein said interface comprises a menu displaying the synchronizing information [ the melody selection menu displayed on display 30 for user to make a selection of melody to be synchronized to incoming call, paragraph 0028], using the same reason in claim 11 to combining to Hayashi.

**For claim 13**, Hayashi teaches the mobile phone communications device in Fig. 2, wherein said information is timing information [ the time information in tempo 501, the setting of tempo, playing speed, in page 8, lines 24-29].

**For claim 15**, Hayashi teaches the mobile phone communications device in Fig. 2, but fails to teach the wherein said processor associates user-selected synchronizing information with the audio file and stores the synchronizing information in said memory.

Shibata teaches these features [ the control unit 140 conducts incoming call setting in paragraph 0027, to stored user selected melody into memory 80 for the incoming call, paragraph 0028], using the same reason in claim 11 to combining to Hayashi.

**For claim 16**, Hayashi teaches the mobile phone communications device [Fig. 2], wherein said processor generates a control signal during playback of the audio file to control the complementary multi-media effect according to the synchronizing information

Art Unit: 2618

[ the LED emits light based on the electrical signal generated from controller 201, page 6, lines 22-28].

**For claim 17**, Hayashi teaches the mobile phone communications device [Fig. 2], wherein the complementary multi-media effect comprises tactile feedback [vibrator 211], and said control signal controls a tactile feedback generator in synchronization with the synchronizing information [ the controller 210 generates electrical signal to synchronize vibrator 211 to played music, page 6, lines 22-28].

**For claim 18**, Hayashi teaches the mobile phone communications device [Fig. 2], wherein the complementary multi-media effect comprises one or more lights [210] and said control signal controls the one or more lights in synchronization with the synchronizing information [ the 201 generates electrical signal to emits light from Led 210 to synchronize with played music data specified in 403-404, page 6, lines 22-28].

**For claim 31**, Hayashi teaches a method [steps in Fig. 3] of synchronizing one or more multi-media effects with an audio file in a mobile communications device [ steps 306, 312, the synchronizing of the music data with LED 210, or vibrator 211, of a mobile phone, abstract, Fig. 2],

the method comprising synchronizing a complementary multi-media effect in the mobile communications device with the audio file based on the synchronizing information [the controller 201 makes a positive determination to synchronize music data playing with the LED, vibrator, turn-on/off, page 7, lines 20-25; S305-307; based on the synchronizing indicating data 401-404, 501-505; the synchronizing target type information 401, music source, music identifier & note number in 402-404, the sync data 501-503].

Hayashi fails to teach the further features in this claim.

Art Unit: 2618

Shibata teaches the selecting synchronizing information regarding an audio file stored in memory of the mobile communications device [ the user can select synchronizing information to select different melody to synchronizing with vibrator 90, paragraph 0029-0030], in order to provide better function to user with user selectable melody to synchronize the incoming call alert. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Hayashi with Shibata's user selectable melody, in order to to provide better function to user with user selectable melody to synchronize the incoming call alert.

**For claim 32,** Hayashi fails to teach the features in this claim.

Shibata teaches wherein selecting information regarding an audio file comprises displaying a menu option to a user of the mobile communications device [cellular phone in Fig. 1, the displaying melodies in display 30 for user to select, 0028], said menu option comprising synchronizing information to be associated with the audio file [ the vibrator on/off synchronizing information is associated with the melody in memory 80, paragraph 0029-0030].

**For claim 35,** Hayashi teaches the further comprises storing the synchronizing information in memory [ the down loading of play data & storing in to RAM of memory 202, page 6, lines 1-7].

**For claim 36,** Hayashi teaches wherein synchronizing a complementary multi-media effect comprises generating a control signal during playback of the audio file to control the complementary multi-media effect according to the selected synchronizing information [ the LED emits light based on the electrical signal generated from controller 201, page 6, lines 22-28; sync data 502, 503].

**For claim 37**, Hayashi teaches the further comprising controlling a tactile feedback generator in synchronization with the selected synchronizing information [ the controller 210 generates electrical signal to synchronize vibrator 211 to played music, page 6, lines 22-28, sync data 503]..

**For claim 38**, Hayashi teaches the further comprising controlling one or more lights in synchronization with the selected synchronizing information [ the sync data 502 for synchronizing music data 401-404 with LED on/off].

**For claim 54**, Hayashi fails to teach the features in this claim. Shibata teaches the method further comprising overwriting selected information in the audio file with the synchronizing information [ the overwriting selected indicating "1 ON", "2 OFF", in to memory 80, for synchronizing melody with vibration, or different screens 30, paragraph 0029-0033], using the same reasoning in claim 31 for combining with Hayashi.

7. Claims 14, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Shibata, as applied to claims 11, 32 above, and further in view of Vandermeijden-'751 A1.

**For claim 14**, Hayashi teaches the mobile phone communications device in Fig. 2. Hayashis & Shibata fail to teach further features in this claim 1.

Vandermeijden teaches the wherein said information is instrument type information [ the user can assign the sound of particular musical instrument to a group of callers, for the ring tone, paragraph 0025], of the mobile telephone for identifying different caller [abstract]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Hayashi with Vandermeijden's different distinct instrument sound for notifying the incoming call, in order to identify different caller.

**For claim 34**, Hayashi fails to teach further features in this claim. Shibata teaches the menu selection of melody. Shibata fails to teach further features for this claim.

Vandermeijden teaches the list of instrument types [ the different musical instrument for different callers for synchronizing to ring tone, paragraph 0025], in order to upgrade the function with the feature to allow user to select different instrument sound for playing back for the incoming callers. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Hayashi, Shibata's menu selection with Vandermeijden's different instrument, in order to provide choice to allow user to select different instrument sound to differentiate incoming call.

8. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Vandermeijden-'751 A1.

**For claim 24**, Hayashi teaches the mobile phone communications device in Fig. 2, but fail to teach the wherein said information is instrument type information [ the user can assign the sound of particular musical instrument to a group of callers, for the ring tone, paragraph 0025], of the mobile telephone for identifying different caller [abstract]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Hayashi with Vandermeijden's different distinct instrument sound for notifying the incoming call, in order to identify different caller

9. Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Fredlund-'649 B2.

**For claim 29**, Hayashi teaches the mobile phone communications device in Fig. 2, but fail to teach the wherein the complementary multi-media effect comprises a camera, and

Art Unit: 2618

said control signal activates the camera to take a picture in synchronization with the synchronizing information.

Fredlund teaches these features [ the camera 10; the generate a signal by analyzing stored audio to capture plurality of images in col. 3, lines 23-47; the synchronizing pleasing effect is created in accordance with played music beat in col. 1, lines 1-6], to creating a better effect by playing music while taking a picture. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Hayashi with the teachings from Fredlund, in order to provide better effect by playing music while taking a picture.

**For claim 30**, Hayahsi teaches the mobile phone communications device in Fig. 2, but fails to teach the wherein the complementary multi-media effect comprises a video sequence, and said control signal controls a display to playback said video sequence in synchronization with the synchronizing information.

Fredlund teaches these features [ the music analyzer analyzing stored audio for determining when to display a sequence of stored images according to the stored audio and a audio reproducer for playing the audio recording, col. 1, line 57 to col. 2, lines 7; display 50], using the same reason in claim 29 for combining Fredlund to Hayashi.

10. Claims 19-20, 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Shibata, as applied to claims 16, 36 above, and further in view of Fredlund-'649.

**For claims 19, 39**, Hayahsi teaches the mobile phone communications device in Fig. 2.



Art Unit: 2618

Hayashi & Shibata fail to teach the wherein the complementary multi-media effect comprises a camera, and said control signal activates the camera to take a picture in synchronization with the synchronizing information.

Fredlund teaches these features [ the camera 10; the generate a signal by analyzing stored audio to capture plurality of images in col. 3, lines 23-47; the synchronizing pleasing effect is created in accordance with played music beat in col. 1, lines 1-6], using the same reason for Fredlund in claim 29 above to combine with Hayashi & Shibata.

**For claims 20, 40,** Hayashi teaches the mobile phone communications device in Fig. 2. Hayashi & Shibata fail to teach wherein the complementary multi-media effect comprises a video sequence, and said control signal controls a display to playback said video sequence in synchronization with the synchronizing information.

Fredlund teaches these features [ the music analyzer analyzing stored audio for determining when to display a sequence of stored images according to the stored audio and a audio reproducer for playing the audio recording, col. 1, line 57 to col. 2, lines 7; display 50], using the same reason in claim 29 for combining Fredlund to Hayashi & Shibata.

11. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Shibata, as applied to claim 32 above, and further in view of Aoki et al. (US 5,763,802).

**For claim 33,** Hayashi teaches the timing signature [ the time information in tempo 501 for setting of tempo, playing speed, based on the different speed of play data in page 8, lines 24-29, for the timing signatures], & Shibata teach the menu option for the selection of melody for synchronizing to vibrator, lamp, but fails to teach the menu option comprising a list timing signatures.

Art Unit: 2618

Aoki et al. [Aoki] teaches the sound timing pattern as the list of timing signature [T1-Tm+1 in Fig. 2, col. 3, line 56 to col. 4, line 21], in order to identify a sound section [abstract]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Hayashi, Shibata's menu selection with Aoki's listing of sound timing patterns, in order to provide better features to allow user to select sound timing pattern.

12. Claims 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Aoki-'802.

**For claim 42,** Hayashi fails to teach the wherein analyzing said sample to determine synchronizing information [ the analyzing music data in indicating data 401-404, for determine the synchronizing music data], but fail to teaches comprises sectioning said sample into a plurality of measures, each said measure comprising an equivalent number of notes.

Aoki teaches these features [ the search a sound pattern via chord analysis of each divided sound performance section, sample, which has a predetermined number of beats, col. 1, line 58 to col. 2, line 6, Fig. 2-6; the predetermined number of beats is the equivalent number of notes in the measure], in order to identify a sound section [abstract]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Hayashi with Aoki's predetermined number of beats in the performance section, in order to identify the music data.

**For claim 43,** Hayashi teaches the controller 201 to determined the synchronizing information as shown in claim 1, but fails to teach the wherein analyzing said sample determine the notes that occur within a desired beat in each said measure.

Art Unit: 2618

Aoki teaches these features [ the analyzing divided section of the performance data & comparing the harmonic tone associated with the sound pattern S1-S4, for identifying a sound pattern in col. 7, lines 10-33; the predetermined number of beats in col. 1, line 58 to col. 2, line 6], using the same reason for Aoki in claim 42 above to combine with Hayashi.

13. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Adams (US 2003/0017,808 A1).

**For claim 48**, Hayashi teaches the mobile phone communication device in Fig. 2 & the analyzing sample to determine the synchronizing information 502-502, 401-404, but fails to teach the sampling the output of a MIDI synthesizer.

Adams teaches the sampling the output of a MIDI synthesizer [ the processor GPP 12 parses the MIDI output stream into synthesis packets for outputting audio signal via DAC 16, paragraph 0019, Fig. 1-2], for the low cost 3G wireless phone [0016]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hayashi with Adams' processing the output of MIDI data for audio synthesis, in order to reduce the cost.

14. Claims 49-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Adams, as applied to claim 48 above, and further in view of Fujiwara et al. (US 6, 800,799 B2).

**For claim 49**, Hayashi teaches the mobile phone communication device in Fig. 2 & the analyzing sample to determine the synchronizing information 502-502, 401-404. Hayashi & Adams fail to teach the detecting a peak amplitude within said sample.

Art Unit: 2618

Fujiwara teaches these features [ the detecting of the peaks of audio signal AL1 during playback, for synchronization, in col. 12, lines 18-27; the applying threshold TH1 to audio peaks in col. 13, lines 16-20], in order to synchronize the timing of the audio playing back [abstract]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Hayashi, Adams with Fujiwara's peak detecting, threshold, in order to synchronize the timing of the audio playing back

**For claim 50**, Hayashi teaches the mobile phone communication device in Fig. 2 & the analyzing sample to determine the synchronizing information 502-502, 401-404. Hayashi & Adams fail to teach the comparing said detected peak amplitude to a threshold value [ the detecting of the peaks of audio signal AL1 during playback, for synchronization, in col. 12, lines 18-27; the applying threshold TH1 to audio peaks in col. 13, lines 16-20], using the same reason in claim 49 for Fujiwara to combine with Hayashi & Adams.

### Claims Objection

15. Claims 10, 21, 44-47, 51-53 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Regarding **claims 10, 21**, the cited prior arts in below fail to teach the system interface to control an external device connected via the system interface according to the synchronizing information.

**For claim 44**, the cited prior arts in below fail to teach the analyzing said sample to determining synchronizing information further comprising calculating weight value by summing a velocity parameter of a corresponding note-on event for each said note that occurs within said desired beat in each said measure.

Art Unit: 2618

**For claim 45**, the cited prior arts in below fail to teach the wherein analyzing said sample to determine synchronizing information comprises calculating a first value and a second value based on a first candidate time signature and a second candidate time signature, respectively. **Claims 46-47** are objected to due to their dependency upon objected claim 45.

**For claim 51**, the cited prior arts in below fail to teach the wherein synchronizing the one or more complementary multi-media effects with the audio file comprises generating a control signal based on the comparison of said detected peak amplitude and said threshold value. **For claim 52**, the cited prior arts in below fail to teach the wherein synchronizing the one or more multi-media effects with the audio file varying the intensity of the one or more complementary multi-media effects based on the comparison of said detected peak amplitude and said threshold value. **For claim 53**, the cited prior arts in below fail to teach the wherein synchronizing the one or more complementary multi-media effects comprises varying the duration of activation of the one or more complementary multi-media effects based on the comparison of said detected peak amplitude and said threshold value.

The following is the cited prior arts considered:

**Hayashi, Shibata, Brenner, Vandermeijden, Fredlind, Aoki, Adams, Fujiwara, Futamase, Armanto et al. (Us 6,094,587), Chung (US 2003/0162,571 A1), Nishitani (US 2003/0045,274 A1), Matsuda et al. (US 2001/0014,616 A1), Ito (US 6,597,928 B2), Kawasaki et al. (US 2002/0142,810 A1), Kim (US 6,278,884 B1), Brown et al. (US 2005/0190,199A1).**

### **Conclusion**

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

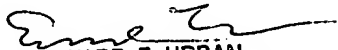
Art Unit: 2618

A. Futamase et al. (US 2003/0224,767 A1) teaches the personal computer has p2 module for editing, adding, the timer and effect parameters in configuration information for use as melody ringing tone or back ground music which are extracted from the performance information [ paragraph 0152, Fig. 10, Fig. 4-5].

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (571) 272-7889. The examiner can normally be reached on 8:00am-5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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June 6, 2006.

  
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